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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,510	02/13/2004	Eric H. Carter	MS306138.01 / MSFTP551US	8913
27195	7590	03/24/2008		
AMIN, TUROCY & CALVIN, LLP				
24TH FLOOR, NATIONAL CITY CENTER				
1900 EAST NINTH STREET				
CLEVELAND, OH 44114				
EXAMINER				
VERDL KIMBLEANN C				
ART UNIT		PAPER NUMBER		
2194				
NOTIFICATION DATE		DELIVERY MODE		
03/24/2008		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docket1@thepatentattorneys.com

hholmes@thepatentattorneys.com

osteuball@thepatentattorneys.com

### Office Action Summary

**Application No.**

10/779,510

**Applicant(s)**

CARTER ET AL.

**Examiner**

KimbleAnn Verdi

**Art Unit**

2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date June 9, 2004

### **DETAILED ACTION**

This office action is in response to the Application filed on February 13, 2004. Claims 1-37 are pending in the current application.

#### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "914" has been used to designate both HDD Internal and HDD External of Figure 9.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "712", page 14, line 17.
3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

4. Claims 13 and 14 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

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Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 13 is directed to a computer readable medium having stored thereon computer executable instructions for carrying out the system of claim 1 which constitutes two different statutory classes and should be rewritten in independent form or cancelled.

Claim 14 is directed to a computer system for effecting the method of claim 1 which constitutes two different statutory classes and should be rewritten in independent form or cancelled.

5. Claims 31-36 objected to because of the following informalities:
  - a. Claim 31, line 2, the recitation of "an application, the method comprising", should be, "an application comprising";
  - b. Claims 32-36 the recitation of "the method", should be "the computer-readable medium"; and
  - c. Claim 31, line 1, the recitation of "medium having computer-executed instructions", should be "medium having stored thereon computer-executed instructions".
  - d. Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-23 and 31-37 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With respect to claims 1-23, a "system" is being recited; however, it appears that a system would reasonably be interpreted by one of ordinary skill in the art as software, per se since the body of the claim appears to be software. Applicant claims a schema component and a mapping component, which are data structures and are functional descriptive material as described by Applicant's specification. In addition according to the Applicant's specification, a system can be software pro se (paragraph [0021]). Applicant describes the functionality of the schema component and mapping component but does not disclose any hardware structure. As such, it is believed that an system of claims 1-23 is reasonably interpreted as functional descriptive material, per se.

With respect to claim 14, a "computer" is being recited; however, it appears that a computer would reasonably be interpreted by one of ordinary skill in the art as software, pro se since according to Applicant's specification, a system can be software pro se (paragraph [0021]). As such, it is believed that a computer of claim 14 is reasonably interpreted as functional descriptive material, per se.

Claims 13 and 31-36 are directed to non-statutory subject matter. In view of Applicant's disclosure, specification page 15, lines 29-30, the medium is not limited to storage medium embodiments, instead being defined as including both storage medium embodiments (e.g., CD-ROM discs, ROM cards, floppy discs, magnetic tapes, computer hard drives) and communication medium embodiments (e.g., carrier waves). As such, the claim is not limited to statutory subject matter and is therefore non-statutory. To

overcome this type of 101 rejection the claims need to be amended to include only the physical computer media (e.g., storage media) and not a communication media or other intangible or non-functional media.

Claim 37 recites "a system" and invokes §112, 6<sup>th</sup> paragraph, by reciting means for extending the functionality of an application. However, according to the specification, the means extending the functionality of an application can be software pro se (paragraph [0021]). As such, it is believed that a system of claim 37 is reasonably interpreted as functional descriptive material, per se. However, function descriptive material is nonstatutory when claimed as descriptive material per se. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Since claim 37 does not recite the means for extending the functionality of an application as being recorded on a computer-readable medium, the system is interpreted as comprising functional descriptive material per se and non statutory. See MPEP § 2106.01.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-7, 12, 15-18, 21-22, 24-34, and 37 are rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent Application Publication 2003/0163603 A1 to Fry et al. (hereinafter Fry).

10. As to claim 1, Fry teaches a system that facilitates extending the functionality of an application, comprising:

a schema component (paragraph [0020]) that includes a schema element (paragraph [0020]) representative of domain terminology of a problem to be solved (e.g. any defined schema is representative of domain terminology of a problem to be solved (paragraph [0020])); and

a mapping component (paragraph [0022]) that maps the schema element to a construct of a host application programmable interface (API) (paragraphs [0020] and [0030]).

11. As to claim 2, Fry teaches the system of claim 1, the API is associated with at least one of a word processing application, spreadsheet application, drawing application, presentation graphics application, website design and development application, database application, project management application, publication application, note management application and, browser and communication application (paragraphs [0022] and [0023]).

12. As to claim 3, Fry teaches the system of claim 1, the schema component (paragraph [0020]) facilitates generation of at least one of a data programming model

(paragraph [0029]) and a view programming model (paragraphs [0020], [0030], and [0043]).

13. As to claim 4, Fry teaches the system of claim 1, further comprising a generation component (paragraph [0022]) that generates at least one of a data programming model (paragraph [0029]) and a view programming model (paragraphs [0020], [0030], [0029] and [0043]).

14. As to claim 5, Fry teaches the system of claim 1, further comprising a generation component (paragraph [0022]) that generates a data programming model and a view programming model (paragraphs [0029] and [0043]) that are automatically connected to each other via data binding (paragraphs [0033]-[0035]).

15. As to claim 6, Fry teaches the system of claim 1, further comprising a generation component (paragraph [0022]) that generates at least one of a data programming model (paragraph [0029]) and a view programming model (paragraphs [0020] and [0030]), wherein the data programming model interfaces to the host API via the view programming model (paragraphs [0041]-[0043]).

16. As to claim 7, Fry teaches the system of claim 1, further comprising a separation component (paragraph [0027]) that separates data from document content (paragraph [0027]).

17. As to claim 12, Fry teaches the system of claim 1, the schema component (paragraph [0020]) and the mapping component (paragraph [0022]) facilitate generation of a new API that interfaces to the host API (paragraphs [0030] and [0043]-[0044]).



18. As to claim 15, Fry teaches the system of claim 1, the schema component (paragraph [0020]) includes a view schema (paragraph [0043]) that represents only data of interest of a host application (paragraph [0020]).

19. As to claim 16, Fry teaches the system of claim 1, the schema component (paragraph [0020]) includes a view schema (paragraph [0043]) that facilitates pulling a plurality of objects of interest from a plurality of the host APIs (paragraph [0044]).

20. As to claim 17, Fry teaches the system of claim 1, at least one of the schema component (paragraph [0020]) and the mapping component (paragraph [0022]) facilitate generation of a view API (paragraphs [0043]-[0044]) that is a hybrid of view schema (paragraph [0043]) and the host API (paragraphs [0043]-[0044]).

21. As to claim 18, Fry teaches a system that facilitates extending the functionality of an application, comprising:

a schema component (paragraph [0020]) that includes a schema in terms of a problem to be solved (e.g. any defined schema is representative of domain terminology of a problem to be solved (paragraph [0020]) and a mapping of the terms to generic objects of an API of a host application (paragraphs [0020] and [0030]); and

a generation component (paragraph [0022]) that generates at least one programming model based on the schema that interfaces to the API (paragraphs [0020] and [0030]).

22. As to claim 21, Fry teaches the system of claim 18, the schema component facilitates generation of a new API that interfaces to the API (paragraphs [0030] and [0043]-[0044]).

23. As to claim 22, Fry teaches the system of claim 18, the schema component facilitates manipulation of a variable without reference to underlying register and stack allocations (paragraph [0044]).

24. As to claim 24, Fry teaches a method of extending the functionality of an application, comprising:

creating a schema of problem domain elements of a problem to be solved (paragraph [0020]);

mapping the problem domain elements to constructs interpretable by one or more generic application interfaces of the application (paragraphs [0020] and [0030]);  
and

generating a program model based on the mapping of the problem domain elements (paragraphs [0020] and [0030]) such that the one or more generic application interfaces can be accessed via the program model using the problem domain elements (paragraphs [0020] and [0030]).

25. As to claim 25, Fry teaches the method of claim 24, further comprising automatically separating the program model into a data model (paragraph [0029]) and a view model (paragraph [0043]).

26. As to claim 26, Fry teaches the method of claim 24, further comprising exposing data of the problem domain elements as named objects in a view model (paragraphs [0041]-[0043]).

27. As to claim 27, the method of claim 24, further comprising exposing data of the problem domain elements as declarations in a data model (paragraphs [0020], [0030], [0029]).

28. As to claim 28, Fry teaches the method of claim 24, the program model is a schema-based, machine generated model (paragraphs [0020] and [0030]).

29. As to claim 29, Fry teaches the method of claim 24, further comprising exposing data of the problem domain elements as first class named objects (paragraph [0044]).

30. As to claim 31, Fry teaches a computer-readable medium having computer-executable instructions for performing a method for extending the functionality of an application, the method comprising:

creating a mapping of a schema to one or more generic application interfaces of the application (paragraph [0030]);

generating a view model from the mapped schema (paragraph [0043]), the view model includes view data that is mapped to objects of the application (paragraph [0043]); and

generating a data model from the mapped schema (paragraph [0029]), the data model including data that is mapped to objects of the application (paragraphs [0029] and [0043]).

31. As to claim 32, Fry teaches the method of claim 31, further comprising data binding the view model to the data model (paragraphs [0033]-[0035]).

32. As to claim 33, Fry teaches the method of claim 31, the view model uses portions of the schema that are mapped to problem domain terms related to a problem to be solved (paragraphs [0020], [0029] and [0043]).

33. As to claim 34, Fry teaches the method of claim 31, further comprising extracting the view data that is mapped to objects of the applications and exposing the view data as view controls (paragraphs [0020], [0029] and [0043]).

34. As to claim 37, Fry teaches a system that facilitates extending the functionality of an application comprising:

means for creating a mapping of a schema to one or more generic application interfaces of the application (paragraph [0030]);

means for generating a view model from the mapped schema (paragraph [0043]), the view model includes view data that is mapped to objects of the application (paragraph [0043]);

means for generating a data model from the mapped schema (paragraph [0029]), the data model including data that is mapped to objects of the application (paragraph [0029]); and

means for propagating changes to the data model to contents of a document via a data binding mechanism to view controls (paragraph [0043]).

***Claim Rejections - 35 USC § 103***

35. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

36. Claims 8-11, 13-14, 19-20, 23, 30, and 35-36 rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent Application Publication 2003/0163603 A1 to Fry et al. (hereinafter Fry) in view of United States Patent Application Publication 2003/0159030 1 to Evans.

37. As to claim 8, Fry teaches the invention substantially as claimed including a separation component (paragraph [0027]).

Fry does not explicitly disclose generates a data island in a document of a host application.

However Evans teaches generates a data island in a document of a host application (paragraph [0022]).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the unmarshaller of Fry with the teachings of unencrypter from Evans because this feature would have provided a mechanism to decrypt the data, in the data island, using the same encryption routine used by the sender, once the data island is decrypted, the data receiver loads the results into the XML document object model (DOM), and once the results are in the DOM, the data elements are extracted from the data island using the appropriate XML document object properties and methods (paragraph [0020] of Evans).

38. As to claim 9, Fry as modified teaches the data island is editable (paragraph [0022] of Evans).

39. As to claim 10, Fry as modified teaches the data island can be at least one of accessed and modified without launching the host application (paragraph [0022] of Evans).
40. As to claim 11, Fry as modified teaches contents of the data island and contents of the document are synchronized when the document is run inside the host application via data binding (paragraph [0022] of Evans).
41. As to claim 13, Fry as modified teaches a computer readable medium having stored thereon computer executable instructions for carrying out the system of claim 1 (paragraph [0011] of Evans).
42. As to claim 14, Fry as modified teaches a computer that employs the system of claim 1 (paragraph [0002] of Evans).
43. As to claim 19, Fry as modified teaches further comprising a separation component (paragraph [0027] of Fry) that generates an editable data island in a document of the host application (paragraph [0022] of Evans).
44. As to claim 20, this claim is rejected for the same reasons as claim 11 since claim 20 recites the same or equivalent invention, see the rejection to claim 11 above.
45. As to claim 23, this claim is rejected for the same reasons as claim 10 since claim 23 recites the same or equivalent invention, see the rejection to claim 10 above.
46. As to claim 30, Fry as modified teaches the method of claim 24, further comprising separating data from a view model of the program model (paragraph [0029] of Fry) by, generating data that conforms to the schema (paragraphs [0029] and [0043] of Fry); and

saving the data as a data island in a document of the application (paragraph [0022] of Evans).

47. As to claim 35, Fry as modified teaches the method of claim 31, the data model is generated by, conforming the data to the schema (paragraphs [0029] and [0043] of Fry);

and saving the data as a data island in a document of the application (paragraph [0022] of Evans).

48. As to claim 36, Fry as modified teaches the method of claim 35, further comprising:

connecting the data model to the data island (paragraph [0022] of Evans); and  
synchronizing contents of the data island with contents of the document when the application processes the document (paragraph [0022] of Evans).

### ***Conclusion***

49. The prior art made of record on the accompanying PTO-892 and not relied upon, is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KimbleAnn Verdi whose telephone number is (571)270-1654. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KV  
March 13, 2004

/Li B. Zhen/

Primary Examiner, Art Unit 2194